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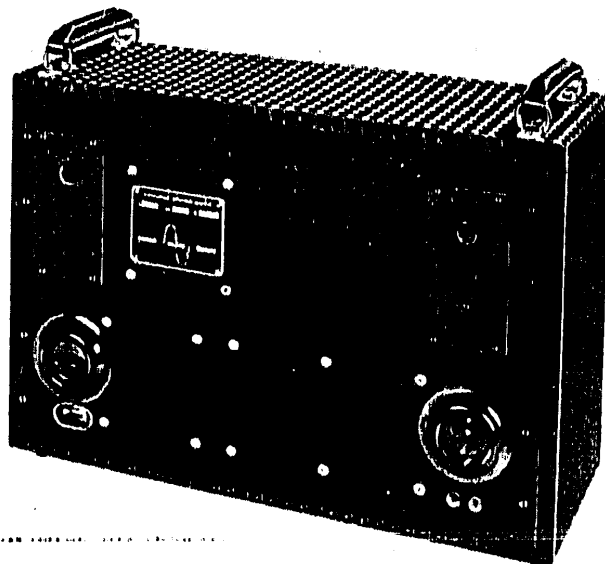
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KŘÍŽÍK ST 500 VA ELECTRONIC A. C. VOLTAGE STABILISER



APPLICATION

This A. C. mains voltage stabiliser supplies a constant voltage notwithstanding fluctuations of mains voltage and variations of load. It is designed for use in measurements, in photography (feeding of light sources, especially for colour film), for maintaining constant speed of rotation of motors, constant input for furnaces, etc.

DESCRIPTION

The basic part of the KŘÍŽÍK stabiliser is a choke, connected via an auto-transformer between mains and load. The reactance of the choke varies in accordance with the magnitude of its D. C. saturation. The value of the saturation current depends, in its turn, on the output voltage, which controls the saturation current electronically by means of a diode of special design.

The KŘÍŽÍK 500 VA stabiliser is housed in an iron cabinet of rugged construction, finished in black lacquer and provided with a carrying handle. All parts of the unit form a single whole with the front panel, so that the whole stabiliser can be easily removed from its cabinet and built into different kinds of equipment. Dimensions and fixing holes conform to the standard specifications for panel mounting equipment.

The mains cord is provided with a large-size plug. The stabilised voltage is brought out through a standard socket outlet. Two insulated single sockets, connected to the outlet socket are fitted on the front panel for attachment of a control voltmeter.

A terminal strip is provided inside the unit, which is used for mains input connections and stabilised output connections in case the stabiliser is mounted in a rack.

ADVANTAGES

The output voltage of the KŘÍŽIK stabiliser is independent of load changes from no-load to the nominal rating. Owing to the electronic circuit employed, even large mains voltage surges and sudden increases of load are compensated for practically instantaneously. Power frequency variations do not affect the action of the stabiliser. The unit stabilizes within very wide input voltage limits. Its action is absolutely automatic and noiseless, no moving parts being used. Valve wear has no appreciable influence on the accuracy of stabilisation. The wave form of the output voltage remains practically sine-shaped.

TECHNICAL DATA

Input voltage: 190 to 240 V; other voltage ranges available to special order. Power frequency: 45 to 65 c/s.

Output voltage: continuously adjustable from 210 to 230 V, or within other limits according to order.

Wave form distortion: 5% max.

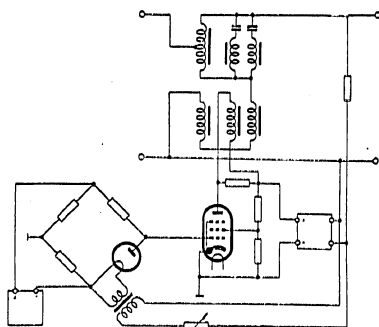
Time required for adjustment to sudden changes of mains voltage or load: 1/5 sec.

Accuracy of output voltage stabilisation:

a) Effect of input voltage variations... 0.2%.

b) Effect of changes in load... 0.3%.

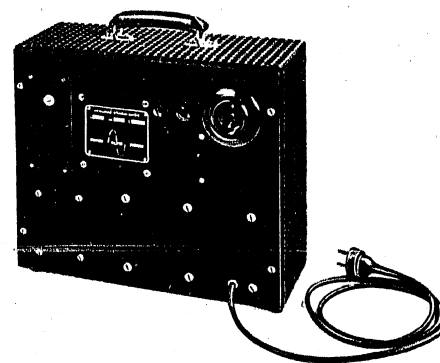
Valve complement (TESLA valves): 1 × RHT 1, 2 × AZ 1, 1 × 4654.



| Item | Model | Dimensions mm | | | Weight kg | Order No. | Price |
|---|------------------|---------------|--------|-------|-----------|-----------|-------|
| | | width | height | depth | | | |
| Electronic voltage stabiliser (in cabinet) | KŘÍŽIK ST 500 VA | 510 | 380 | 210 | 29 | | |
| Electronic voltage stabiliser (without cabinet) | | 485 | 315 | 200 | 26 | | |



KŘÍŽIK ST 250 VA ELECTRONIC A. C. VOLTAGE STABILISER



APPLICATION

This A. C. mains voltage stabiliser supplies a constant voltage notwithstanding fluctuations of mains voltage and variations of load. It is designed for use in measurements, in photography (feeding of light sources, especially for colour film), for maintaining the constant speed of the rotation of motors, constant input for furnaces, etc.

DESCRIPTION

The basic part of the KŘÍŽIK stabiliser is a choke, connected via an auto-transformer between mains and load. The reactance of the choke varies in accordance with the magnitude of its D. C. saturation. The value of the saturation current depends on the output voltage, which controls the saturation current electronically by means of a diode of special design.

The KŘÍŽIK 250 VA stabiliser is housed in an iron cabinet of robust construction, finished in black lacquer and provided with a carrying handle. All parts of the unit are mounted on the back of the front panel, so that the stabiliser can be removed from its cabinet as a single whole and built into different kinds of equipment.

The mains lead is formed by a cord, 1.5 m long, terminating in a standard plug. The stabilised voltage is brought out through a standard socket outlet.

A control knob for accurate adjustment of stabilised voltage is fitted next to the socket.

ADVANTAGES

The output voltage of the KŘIŽIK stabiliser is independent of load changes from no-load to the nominal rating. Owing to the electronic circuit employed, even large mains voltage surges and sudden increases of load are compensated for practically instantaneously. Power frequency variations do not affect the action of the stabiliser. The unit stabilizes within very wide input voltage limits. Its action is absolutely automatic and noiseless, no moving parts being used. Valve wear has no appreciable influence on the accuracy of stabilisation. The wave form of the output voltage remains practically sine-shaped.

TECHNICAL DATA

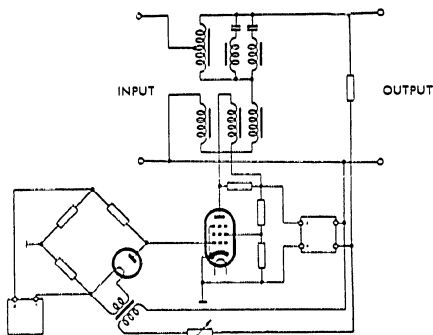
Input voltage: 190 to 240 V
 other voltage ranges available to special order.
 Power frequency: 45 to 65 c/s.
 Output voltage: continuously adjustable from 210 to 230 V, or within other limits according to order.
 Wave form distortion: 5% max.
 Time required for adjustment to sudden changes of mains voltage or load: $\frac{1}{2}$ sec.

Accuracy of output voltage stabilisation:

a) Effect of input voltage variations 0.2%.

b) Effect of changes in load 0.3%.

Valve complement (TESLA valves): 1 \times RHT 1, 2 \times AZ 1, 1 \times 4654

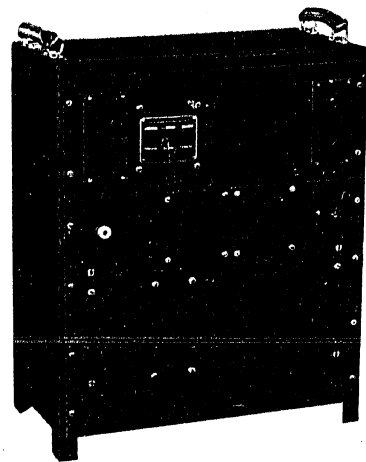


Circuit diagram

| Item | Model | Dimensions mm | | | Weight kg | Order No. | Price |
|---|------------------|---------------|--------|-------|-----------|-----------|-------|
| | | width | height | depth | | | |
| Electronic voltage stabiliser (in cabinet) | KŘIŽIK ST 250 VA | 375 | 350 | 150 | 19 | | |
| Electronic voltage stabiliser (without cabinet) | | 370 | 300 | 140 | 17 | | |



KŘIŽIK ST 1 kVA and ST 2 kVA ELECTRONIC A. C. VOLTAGE STABILISERS



APPLICATION

The A. C. mains voltage stabiliser supplies a constant voltage even at fluctuations of mains voltage and variations of load. It is designed for use in measurements, in photography for feeding of light sources especially for colour film, for maintaining constant speed of revolutions of motors, constant input for furnaces, etc.

DESCRIPTION

The basic part of the KŘIŽIK stabiliser is a choke, connected via an auto-transformer between mains and load. The reactance of the choke varies in accordance with the magnitude of its D. C. saturation. The value of the saturation current depends in its turn on the output voltage which controls the saturation current electronically by means of a diode of special design. The KŘIŽIK ST 1 kVA and ST 2 kVA stabilisers are housed in solid metal cabinets lacquered in black. The two-piece front panel forms a single whole with the upper part, the so-called control block. The so-called power block is mounted in the bottom part. The mains lead and the output leads are connected to the terminal strip accessible after removal of the rear panel.

ADVANTAGES

The output voltage of the KRÍŽIK stabiliser is independent of load changes from no-load to the nominal rating. Owing to the electronic circuit employed, even large mains voltage surges and sudden increases of load are compensated for practically instantaneously. Power frequency variations do not affect the action of the stabiliser. The unit stabilises within very wide input voltage limits. Its action is absolutely automatic and noiseless, no mobile parts being used. Valve wear has no appreciable influence on the degree of stabilisation. The wave form of the output voltage remains practically sine-shaped.

TECHNICAL DATA

Input voltage: 190 to 240 V; other voltage ranges available to special order.
Power frequency: 45 to 65 c/s.

Output voltage: continuously adjustable from 210 to 230 V or within other limits according to order.

Wave form distortion: 5% max.

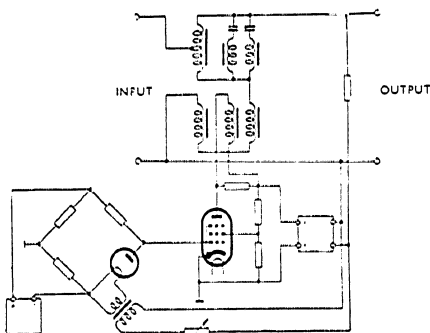
Time required for adjustment to sudden changes of mains voltage or load: $\frac{1}{10}$ secs.

Accuracy of output voltage stabilisation:

a) Effect of input voltage variations 0.2%.

b) Effect of changes in load 0.3%.

TESLA valves: 1 \times RHT 1, 2 \times AZ 1, 1 \times 4654.

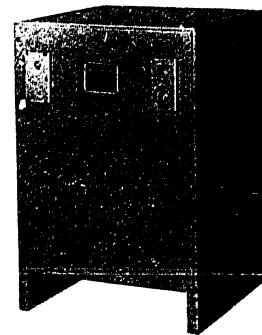


Circuit diagram

| Item | Model | Dimensions mm | | | Weight kg | Order No. | Price |
|--|----------------|---------------|--------|-------|-----------|-----------|-------|
| | | width | height | depth | | | |
| Electronic voltage stabiliser (in cabinet) | KRÍŽIK ST1 kVA | 510 | 650 | 230 | 47.5 | | |
| without cabinet: | | | | | | | |
| a) control block | | 485 | 180 | 170 | 7 | | |
| b) power block | | 485 | 360 | 180 | | | |
| Electronic voltage stabiliser (in cabinet) | KRÍŽIK ST2 kVA | 510 | 650 | 280 | 58 | | |
| without cabinet: | | | | | | | |
| a) control block | | 485 | 180 | 170 | 7 | | |
| b) power block | | 485 | 360 | 270 | 53 | | |



KRÍŽIK ST 5 kVA ELECTRONIC A. C. VOLTAGE STABILISER



APPLICATION

The A. C. mains voltage stabiliser supplies a constant voltage notwithstanding fluctuations of mains voltage and variations of load. It is designed for use in measurements, in photography (feeding of light sources, especially for colour film), for maintaining constant speed of revolutions of motors, constant input for furnaces, etc.

DESCRIPTION

The basic part of the KRÍŽIK stabiliser is a choke, connected via an auto-transformer between mains and load. The reactance of the choke varies in accordance with the magnitude of its D. C. saturation. The value of the saturation current depends in its turn on the output voltage, which controls the saturation current electronically by means of a diode of special design. The KRÍŽIK 5 kVA stabiliser is housed in a solid rack constructed of angle-irons. The two-piece front panel forms a single whole with the upper part, the so-called control block, which can be extracted from the apparatus and placed separately. The power block is, because of its great weight, built into the angle-iron frame and can be set up apart, e. g. in the engine room. The two parts are interconnected by means of four leads; if the control block is mounted together with the apparatus to be supplied from the stabiliser, again only four leads are needed for connection. The mains lead and output leads are connected to the

terminal strip in the power block, which becomes accessible after removal of the rear panel.

ADVANTAGES

The output voltage of the KŘIŽIK stabiliser is independent of load changes from no-load to the nominal rating. Owing to the electronic circuit employed, even large mains voltage surges and sudden increases of load are compensated for practically instantaneously. Power frequency variations do not affect the action of the stabiliser. The unit stabilises within very wide input voltage limits. Its action is absolutely automatic and noiseless, no moving parts being used. Valve wear has no appreciable influence on the degree of stabilisation. The wave form of the output voltage remains practically sine-shaped.

TECHNICAL DATA

Input voltage: 190 to 240 V; other voltage ranges available to special order.
Power frequency: 45 to 65 c/s.

Output voltage: continuously adjustable from 210 to 230 V, or within other limits according to order.

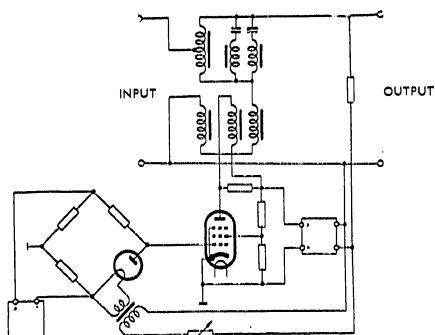
Wave form distortion: 5% max.

Accuracy of output voltage stabilisation:

a) Effect of input voltage variations 0.2%.

b) Effect of changes in load 0.3%.

TESLA valves: 1 × RHT 1, 2 × EL 6.

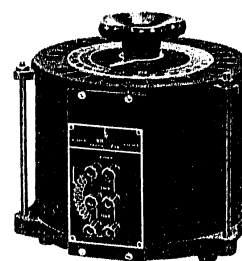


Circuit Diagram

| Item | Model | Dimensions mm | | | Weight kg | Order No. | Price |
|--|-----------------|---------------|--------|-------|-----------|-----------|-------|
| | | width | height | depth | | | |
| Electronic voltage stabiliser (in cabinet) | KŘIŽIK ST 5 kVA | 510 | 750 | 500 | 130 | | |
| Electronic voltage stabiliser: | | | | | | | |
| a) control block | | 485 | 315 | 270 | 18 | | |
| b) power block with cabinet | | 510 | 750 | 500 | 112 | | |



KŘIŽIK RT VARIABLE AUTO-TRANSFORMERS



APPLICATION

Continuous voltage control within wide range. Suitable for motor speed control, heat control for electric furnaces, ovens, etc., illumination control in theatres, cinemas, etc., testing and calibration of measuring instruments in research and laboratory work and wherever A.C. voltage should be adjusted smoothly and continuously.

DESCRIPTION

The KŘIŽIK variable auto-transformer is wound in a single layer on a toroidal iron core. Apart from the winding terminals two taps are brought out: one fixed and the other connected to a brush contact. As the control knob is rotated a carbon brush travels along the winding, tapping off a part of the voltage. The resistance of the carbon brush is so chosen that no excessive heat is generated in the short-circuited turn. The transformer is housed in a metal case provided with holes ensuring effective air cooling. All terminals are connected to a terminal block. Ganged transformer assemblies of two or three units, for use on three-phase systems, are supplied on request.

ADVANTAGES

KŘIŽIK auto-transformers have smaller dimensions than the ordinary types of variable transformers of the same rating. They provide direct continuous voltage

control without the use of complicated mechanical gears. The terminals on the panel are clearly marked. The diagram of the winding facilitates correct connections for all purposes. The terminals are of the universal type permitting the use of plugs and cable ends or ordinary banana plugs. Output voltage is variable from zero to above mains voltage.

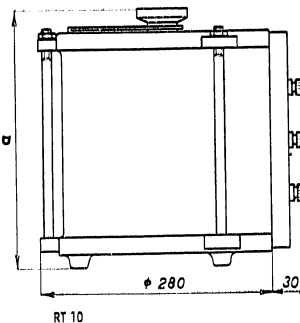
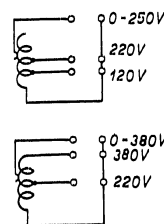
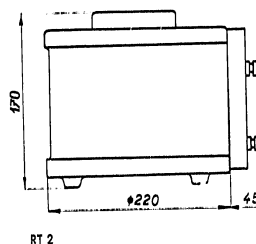
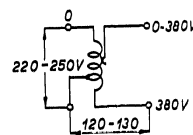
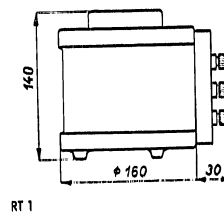
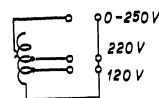
TECHNICAL DATA

| Item | Model | Max. current A | Input voltage V | Output voltage V | Dimensions mm | | Weight kg | Order No. | Price |
|---------------------------------------|--------------------|----------------|-----------------|------------------|---------------|--------|-----------|-----------|-------|
| | | | | | dia. | height | | | |
| Variable auto-transformer | KRIZIK RT 1/250 | 1 | 120,220 | 0-250 | 160 | 140 | 4.5 | | |
| Variable auto-transformer | KRIZIK RT 2/380 | 2.5 | 120,220 380 | 0-250 | 240 | 210 | 12.5 | | |
| Variable auto-transformer | KRIZIK RT 10/250 | 10 | 120,220 | 0-250 | 290 | 245 | 23.5 | | |
| Variable auto-transformer | KRIZIK RT 10/380 | 10 | 120,220 380 | 0-380 | 290 | 260 | | | |
| Two-gang variable auto-transformer | KRIZIK RT 20/250 | 20 | 120,220 | 0-380 | 290 | 400 | | | |
| Two-gang variable auto-transformer | KRIZIK RT 20/380 | 20 | 120,220 380 | 0-380 | 290 | 420 | | | |
| Three-phase variable auto-transformer | KRIZIK RT 2/3X380 | 3X2.5 | 120,220 380 | 0-380 | 240 | 470 | | | |
| Three-phase variable auto-transformer | KRIZIK RT 10/3X380 | 3X10 | 120,220 380 | 0-380 | 290 | 780 | | | |

The voltages as quoted above are valid at a frequency of 50 c/s. KRIZIK variable auto-transformers can be operated at any voltages lower than those rated.

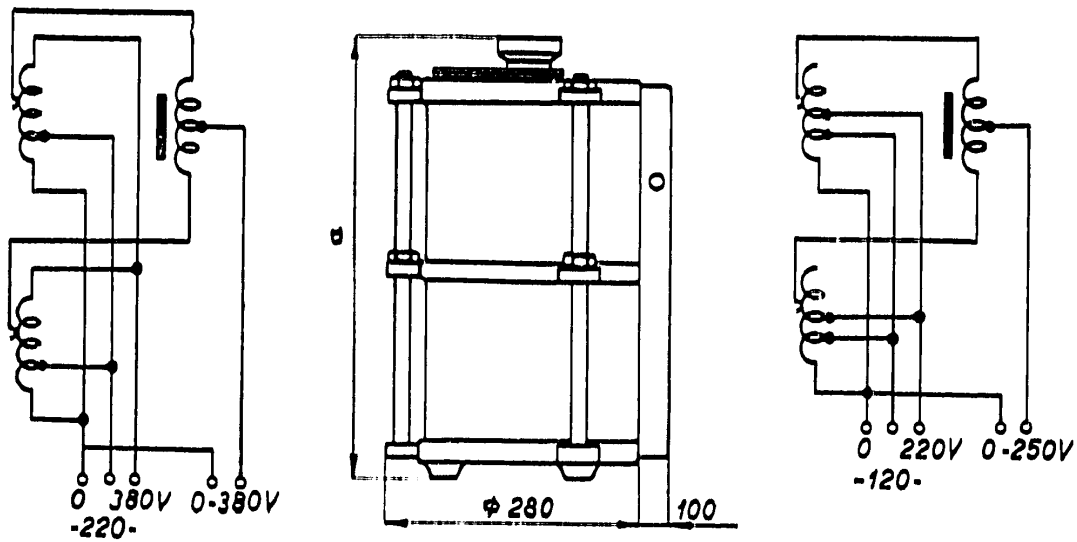
KRIZIK RT VARIABLE VOLTAGE TRANSFORMERS

Schematic diagrams and dimensional sketches

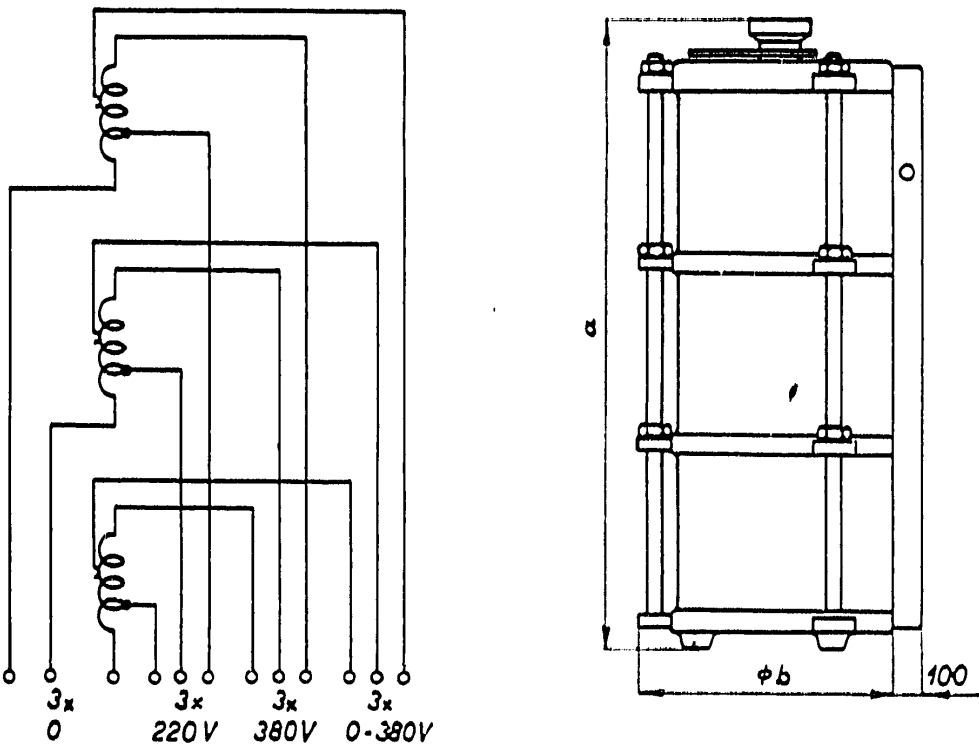


RT 10 250 V: α = 245; RT 10 380 V: α = 295

Schematic diagrams and dimensional sketches



RT 20

RT 20/250: $a = 400$; RT 20/380: $a = 520$ 

RT 2/3 RT 10/3

RT 2/3: $a = 470$
 $b = 230$ RT 10/3: $a = 780$
 $b = 280$